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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,110	09/09/2003	Jonathan L. Kendall	IR-2869(EC)DIV2	4338
7590	03/03/2004		EXAMINER	
Lord Corporation 111 Lord Drive PO Box 8012 Cary, NC 27512-8012			CHEUNG, WILLIAM K	
			ART UNIT	PAPER NUMBER
			1713	
DATE MAILED: 03/03/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

HN

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/659,110	KENDALL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	William K Cheung	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-33, 35-43 is/are allowed.
- 6) ☒ Claim(s) 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>0909</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. In view of Preliminary Amendment filed September 9, 2003, claims 1-27 have been cancelled. Claims 28-43 are pending.
2. The examiner acknowledges the phone call with applicants' attorney on February 2, 2004, regarding restriction and species election requirement. However, after a careful reconsideration, the examiner has decided to withdraw the restriction and species election requirement. Claims 28-43 are examined with merit.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

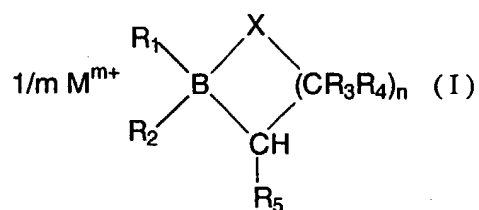
Claim 34 recites a chemical structure in line 2. There is insufficient antecedent basis for this limitation in the claim. The independent claim of claim 34 does not provide sufficient support for a structure having  $X = CH_2$ .

**Allowances**

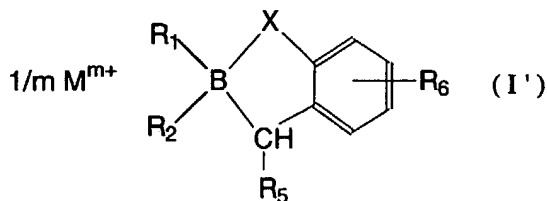
5. Claims 28-33, 35-43 are allowed.
6. The following is an examiner's statement of reasons for allowance:

As of the date of this office action, the examiner has not located or identified any reference that can be used singularly or in combination with another reference including the closest prior art of Zharov et al. (US 5,690,780) to render the present invention anticipated or obvious to one of ordinary skill in the art.

*The invention of claims 28-33, 35-43 relates to a compound which has the structure:*



or



Art Unit: 1713

*wherein for X is oxygen or sulfur; wherein when X represents oxygen, n is the integer 2, 3, 4, or 5; and wherein when X represents sulfur, n is the integer 1, 2, 3, 4 or 5; and R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> are, independently, unsubstituted and substituted alkyl groups containing 1 to 10 carbon atoms, alkylene groups containing 1 to 10 carbon atoms, substituted aryl groups containing 7 to 12 carbon atoms, or unsubstituted aryl groups; alternatively either of R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> in (I) include hydrogen; alternatively, R<sub>1</sub> and R<sub>2</sub> are part of a second unsubstituted or substituted cyclic borate; R<sub>1</sub> and R<sub>2</sub> alternatively comprise a spiro ring or a spiro-ether ring; alternatively, R<sub>1</sub> or R<sub>2</sub> together with R<sub>3</sub> or R<sub>4</sub> in (I) are linked to form a cycloaliphatic ring; alternatively in (I) R<sub>1</sub> or R<sub>2</sub> together with either R<sub>3</sub> or R<sub>4</sub> comprise a cyclic ether ring; and M is any positively charged species with m being greater than 0.*

The closest prior art Zharov et al. (abstract) disclose a polymerizable composition comprising an effective amount of an organoborane amine complex, and an effective amount of an acid, a compound that liberates an organoborane from said internally blocked borate. However, Zharov et al. are silent on the organoborane compound of product thereof as claimed in applicants' claims 28-33, 35-43. Therefore, it would not be apparent to one of ordinary skill in art to use the borane chemistry teachings of Zharov et al. to obtain the borane compounds and product thereof of claims 28-33, 35-43. Therefore, in view of the novelty of the claimed borane compounds, the invention of claims 28-33, 35-43 is allowed.

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung

Patent Examiner

February 22, 2004